

2nd International Workshop towards the Giant Liquid Argon Charge Imaging Experiment (GLA2011)

from Sunday 05 June 2011 at **18:00** to Friday 10 June 2011 at **10:00** (Europe/Helsinki)
at Department of Physics, University of Jyväskylä, Finland (JYFL)

Description The aim of the workshop is to bring together researchers interested in realizing a giant neutrino observatory based on the liquid Argon time projection chamber technology, combining next-generation searches for proton decay and neutrino physics with natural and artificial sources. The workshop will include a visit to Pyhäsalmi – the deepest mine in Europe and one of the sites considered by the LAGUNA design study. With distances of 2300 km from CERN and approximately 7000 km from both KEK/JPARC and FNAL, the Pyhäsalmi site offers a potential optimal location for long baseline neutrino oscillation studies. The workshop aims at fostering a collaboration on medium and long term projects among interested researchers. Reviews of the current efforts taking place worldwide towards building large liquid Argon detectors will be presented.

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Sunday 05 June 2011

19:00 - 21:00 Welcome Reception in the Lobby Alba Hotel

Monday 06 June 2011

08:00 - 20:00 Excursion to Pyhäjärvi town and Pyhäsalmi mine underground visit

Tuesday 07 June 2011

08:30 - 09:10 Welcome address

08:30 **Opening remarks 20'**

08:50 **Welcome address from the Vice-Rector of University of Jyväskylä 20'**

Speaker: Prof. Matti Manninen (University of Jyväskylä)

09:10 - 12:30 Main goals of Giant Liquid Argon Charge Imaging Experiment

09:10 **Overview talk on long baseline oscillation experiments 40'**

Speaker: Prof. Milind Diwan (BNL)

09:50 **Overview talk on astrophysical neutrinos 40'**

Speaker: Prof. Steen Hannestad (Aarhus University)

10:30 **Overview talk on proton decay searches 40'**

Speaker: Dr. Yoshinari Hayato (ICRR)

11:10 **Status of CP violation searches in hadronic sector 40'**

Speaker: Dr. Augusto Ceccucci (CERN)

11:50 **Very Short Baseline Neutrino Oscillation Experiments using Cyclotron Decay-at-Rest Sources 20'**

Speaker: Dr. Sanjib Agarwalla (IFIC Valencia)

12:30 - 14:00 Lunch

14:00 - 15:30 Next generation long baseline neutrino beams

14:00 **FNAL-DUSEL + Project X 30'**

Speaker: Dr. Steve Holmes (FNAL)

14:30 **Near and far future at J-PARC neutrino beam 30'**

Speaker: Prof. Takashi Kobayashi (KEK-IPNS)

15:00 **Plans for CERN-LAGUNA-LBNO beams and beyond 30'**

Speaker: Dr. Ilias Efthymiopoulos (CERN)

15:30 - 16:00 Coffee

16:00 - 17:40 Large cryogenic systems and industrial components

16:20 **Experience and issues in underground construction 20'**

Speaker: Dr. Alan Auld (Alan Auld Group LTD)

16:40 **Study of large cryogenic tanks for LAr storage 30'**

Speaker: Dr. Mike Haworth (Technodyne International Ltd)

17:00 **Large tanks and cryogenic facilities 20'**

Speaker: Dr. Jérôme Sialelli (Société Française d'Etudes et de Réalisations d'Équipements Gaziers (Sofregaz))

17:40 - 18:30 Status of ongoing or planned Liquid Argon and Xenon based projects (I)

17:40 **ICARUS T600 results** 30'

Speaker: Prof. Jan Kisiel (University of Silesia)

18:10 **Status of ArgonTube** 20'

Speaker: Dr. Marcello Messina (University of Bern)

Wednesday 08 June 2011

08:30 - 12:35 Status of ongoing or planned Liquid Argon and Xenon based projects (II)

08:30 **ArgoNeut results** 20'

Speaker: Prof. Carl Bromberg (Michigan State University)

08:50 **T32 @ J-PARC results** 20'

Speaker: Prof. Takasumi Maruyama (KEK-IPNS)

09:10 **Status of MicroBOONE** 20'

Speaker: Dr. Roxanne Guenette (Yale University)

09:30 **Status of the LBNE project** 45'

Speaker: Prof. Robert Svoboda (UC Davis)

10:15 **Coffee** 30'

10:45 **Results from XENON-100 and future plans** 30'

Speaker: Dr. Antonio Jesus Melgarejo Fernandez (Columbia University)

11:15 **Status of XMASS** 20'

Speaker: Dr. Atsushi TAKEDA (ICRR, Univ. of Tokyo)

11:35 **Status of WARP** 30'

Speaker: Dr. Claudio Montanari (INFN Pavia)

12:05 **Status of ArDM** 30'

Speaker: Dr. Alessandro Curioni (ETH Zurich)

12:45 - 14:30 Lunch

14:30 - 15:30 Status of ongoing or planned Liquid Argon and Xenon based projects (III)

14:30 **Design and Performance of the ATLAS LAr calorimeter** 30'

Speaker: Prof. Jose Del Peso (UAM)

15:00 **The cryogenic systems of the LHC experiments** 30'

Speaker: Dr. Johan Bremer (CERN)

15:30 - 16:00 Coffee

16:00 - 17:50 Improvements of the Liquid Argon Charge Imaging technology (I)

16:00 **Recent results on LAr LEM TPC R&D** 20'

Speaker: Mr. Filippo Resnati (ETH Zurich)

16:20 **Micromegas for charge readout of double phase Liquid Argon TPCs** 20'

Speaker: Dr. Marco Zito (CEA Saclay)

16:40 **Development of cold electronics** 30'

Speaker: Prof. Veljko Radeka (BNL)

17:10 **Development of new solutions for warm electronics** 20'

Speaker: Prof. Sandro Centro (Padova University and INFN Padova)

Material:  Slides 

17:30 **Lightguide detector for LAr TPC: Optical Simulation and Reconstruction Methods** 20'

Speaker: Mr. Benjamin Jones (MIT)

19:00 - 23:00 Evening Cruise

Thursday 09 June 2011

08:30 - 10:00 Improvements of the Liquid Argon Charge Imaging technology (II)

08:30 **Development and experience with very high voltage feed-throughs** 20'

	Speaker: Prof. Hanguo Wang (UCLA)
08:50	Status of LAPD 30' Speaker: Dr. Brian Rebel (FNAL)
09:20	Status and plans with 6m3 at CERN 20' Speaker: Dr. Alberto Marchionni (ETH Zurich)
09:40	Liquid Argon Purification Studies using a Novel Recirculation System 20' Speaker: Dr. Kostas Mavrokoridis (University of Liverpool)
10:00 - 10:30	Coffee
10:30 - 12:00	Underground location studies
10:30	Pyhäsalmi site study 30' Speaker: Lauri Uotinen (Kalliosuunnittelu Oy Rockplan Ltd)
11:00	Okinoshima site study 30' Speaker: Prof. Masakazu Yoshioka (KEK-IPNS)
11:30	Preliminary design of the underground facilities for the GLACIER experiment cavern at Canfranc 30' Speaker: Dr. Clemente Sáenz Sanz (ACCIONA Ingeniería)
12:00 - 13:30	Lunch
13:30 - 14:30	Visit to the JYFL Accelerator Laboratory
14:30 - 15:50	Studies on event reconstruction
14:30	LArSoft 30' Speaker: Dr. Eric Church (FNAL)
15:00	QScan 30' Speaker: Mr. Devis Lussi (ETH Zurich)
15:30	Data handling and storage services 20' Speaker: Dr. Pirjo-Leena Forsström (Director, Data Services for Science and Culture, CSC)
16:00 - 16:30	Coffee
16:30 - 18:30	Future steps towards the realization of a Giant Liquid Argon Charge Imaging Detector
16:30	Double-LAr proposal at CERN PS 30' Speaker: Dr. Alberto Guglielmi (Padova University and INFN Padova)
17:00	Status of LBNE LAr and LAr1 30' Speaker: Dr. Bruce Baller (FNAL)
17:30	An underground kton-scale pilot project 30' Speaker: Prof. Andre Rubbia (ETH Zurich)
18:00	Discussion and conclusion 30' Speaker: Prof. Takuya Hasegawa (KEK-IPNS)
19:00 - 23:00	Conference Dinner
Friday 10 June 2011	
08:00 - 10:00	Departure